

Abstract of the Invention

A substituted apicidin derivative, a method of synthesis therefore, and an anti-tumor composition comprising the same are disclosed. The substituent of the derivative is preferably semicarbazone, thiosemicarbazone, hydrazone, tert-butylhydrazone, phenylhydrazone, 2,4-dinitrophenylhydrazone, 4-methoxyphenylhydrazone, 3-methoxyphenylhydrazone, 4-nitrophenylhydrazone, benzylhydrazone, methanesulfonylhydrazone, benzenesulfonylhydrazone, 4-methylbenzenesulfonylhydrazone, benzoylhydrazone, 4-nitrobenzoylhydrazone, carbohydrazone, benzyloxime or acetoxime. The compound has strong inhibition effect against histone deacetylase and detransforming activities and specifically inhibit growth of cancer cells. Therefore, it is useful in preparation of an anti-tumor composition.